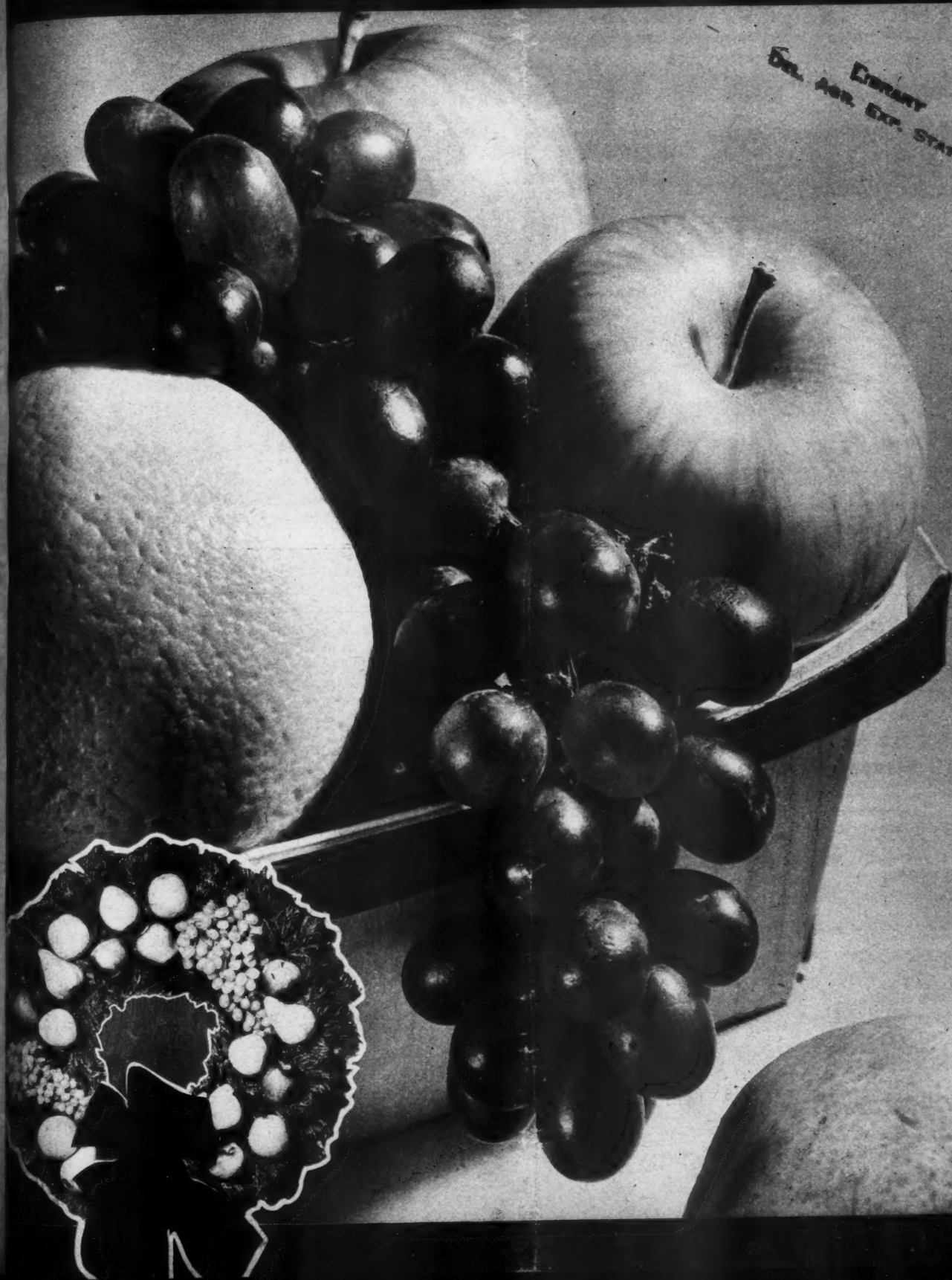


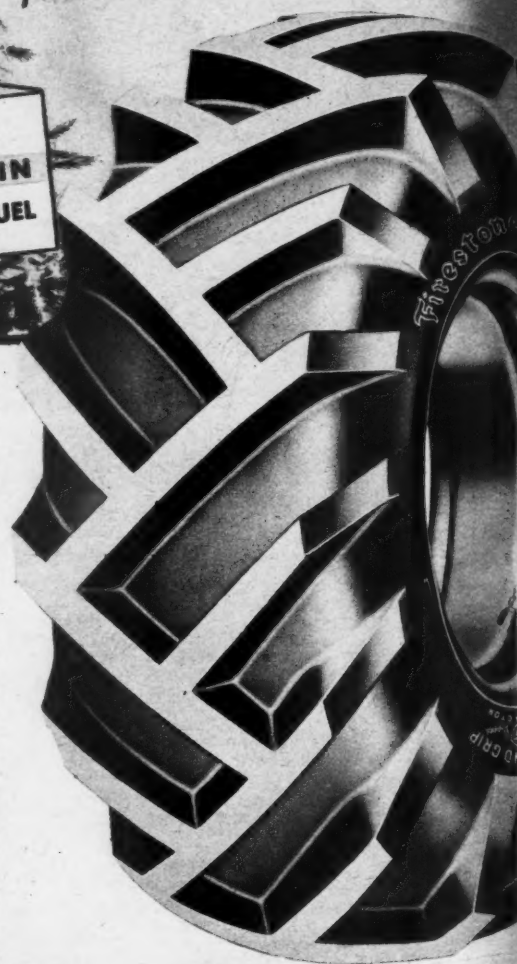
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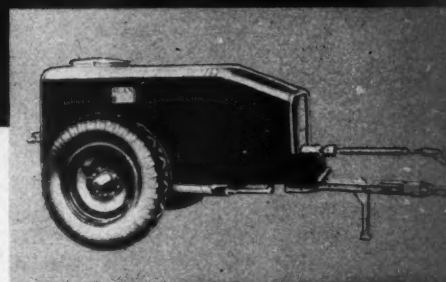
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GROWERS MUST UNITE TO FIGHT LABOR "RACKET"

ORGANIZATION IS ONLY EFFECTIVE DEFENSE AGAINST UNLOADING FEE GRAFT AND THREAT OF CLOSED SHOP IN FRUIT PACKING HOUSES.

WALTER'S BILL PROMISES LEGAL RELIEF

By DEAN HALLIDAY

Washington, D.C.

THERE is evidence a plenty that fruit growers in almost every section of the country face a new and vicious pest in the form of the labor "racketeer."

It is also evident that there is only one effective way for fruit growers to fight such labor rackets as the unloading fee graft and that is by organizing among themselves.

The unloading fee graft is an organized racket. It has reared its ugly head in many markets in many points of the country. By means of intimidation, and in many instances by actual acts of violence, "racketeer" agents of the International Brotherhood of Teamsters are forcing growers to pay for the privilege of trucking their crops to market. Since extortion of this tribute is practiced in the markets of most large cities as a "local racket," the graft is garnered in the form of various kinds of "fees" for permission for the grower to unload his own trucks of produce grown on his own farm. In some sections the "racketeers" compel a grower to employ a union driver to "chauffeur" or merely to "ride" the truck to market.

In some cities the grower is not molested until he reaches the market. Then he is forced to have union unloaders transfer his produce to the platform. In still other markets the grower is forced to pay a fee to the labor "agent" who then merely stands by and watches the grower do his own unloading, after having paid for the privilege. The fees or graft vary according to the greed of the local racketeer who is dictator of the market. In some sections of the country the wage for a union driver to drive or merely to ride, as the case may be, is \$1.35 per hour or fraction thereof. Fees for unloading have ranged anywhere from \$2.50 for 50 cases of apple juice to \$10.65 for the right to unload fruit from a truck. In one case, a grower who had purchased a supply of apple wraps was forced to pay \$4.25 to have them placed on his truck.

Against this organized labor "racket"

AESOP HAD THE ANSWER IN HIS FAMOUS FABLE

IN VIEW of the labor racket which threatens them, individually and collectively, growers will do well to read this fable by Aesop as he told it some 2000 years ago:

"An old man had a great many sons who always were quarreling among themselves. This saddened the father for, although he did all he could to keep peace among them, they would not listen to him.

"At last he thought of a way to show them their folly. He ordered all his sons to be called before him and, taking a short bundle of sticks, he commanded them, one by one, to break it. They all tried and they all failed, for the sticks were so closely bound up that it was impossible to break the bundle. Then the father, untying it and giving a single stick to each son, told him to break it. Each broke the stick easily.

"Then the father cried: 'O my sons, see how strong are all united things! If you would live bound together by love and friendship one for the other, no mortal power could hurt you. But divided as you are, unloving, unfriendly, it would be as easy for anyone to do you harm as it was for you to break these single sticks in two.'"

the grower as an individual is helpless. Appeals for protection to the police of the city in which the market may be located most generally prove futile. Their hands usually are tied by the "higher-ups" who are hand-in-glove with the labor racketeers for political reasons. In one large city a crusading newspaper did expose this labor racket at its largest terminal market. The expose did some temporary good. Police for a time were assigned to the market platforms for the protection of growers while they unloaded their own produce. The relief, however, was very temporary and within a few weeks the labor racketeers were back on the job, more threatening and vicious than before. In such markets a grower who determines as a free-born American to stand on his Constitutional rights and to do his own unloading faces one or both of two things: having his truck wrecked and being "black-jacked" himself.

Since this "racket" is spreading fast, growers must organize quickly to fight it. Do not be lulled into a false sense of security because, by chance, the racket has not yet reached your territory. It will get you sooner or later unless, united with other

growers, you help to scotch it now. Urge your state horticultural society to undertake protective steps. If you are not a member, join at once and then put your shoulder to the wheel along with other members. If there is a marketing group or association in your area and you are not a member, become one without delay. It is better to pay dues to an organization that is set up to do for growers collectively what the same growers cannot do as individuals than it is to pay tribute to a labor "racketeer."

Writing to Washington is not the way to go about this campaign. It is too late for that sort of thing and all a grower will get out of it is the doubtful satisfaction of getting "something off his chest." Here in the nation's capitol officials of the Department of Justice, who might be expected to cope with the situation, admit that their hands have been tied by a rather recent decision handed down by the U. S. Supreme Court. Thurman Arnold, Assistant to the Attorney General, in charge of anti-trust prosecutions, has pointed out, however, that there is hope for relief if the Walter Bill passes.

This Bill, No. H.R. 5218, (it may become a law even before this page comes off the presses) was introduced into Congress this summer by Representative Walter of Pennsylvania. If passed, it will confer jurisdiction on the U. S. Courts in cases involving work stoppages.

The bill would benefit growers damaged by labor racketeering to appeal for relief to federal courts when "strikes, boycotts and agreements by labor organizations, in order to require employers to pay for unnecessary labor, when such requirements are unreasonable and not designed to prevent a speed-up system nor to mitigate the transition to new methods of production or distribution, burden and obstruct interstate commerce."

As an example of what the U. S. Department of Justice is up against without the legal recourse pronounced by the Walter Bill, take the situation in New York City. There the Teamsters Union invaded the Washington Street Market and forced the payment of tribute from growers for the privilege of unloading their trucks. The situation became so bad that the U. S. Department of Justice took the case into the courts. The action was brought against certain members of Local Union No. 807, International Brotherhood of Teamsters. A lower court held the accused guilty but the Department of Justice was blocked when the U. S. Circuit Court reversed the lower court and held in favor of the Unions, exonerating them of extortion and of violating the anti-trust law.

Some months ago a serious situation developed in the Yakima Valley. There on the eve of harvesting apple growers and shippers were faced with strikes called in packing plants and storage warehouses by the produce division of the Teamsters Union. Negotiations between the employers and the Union had been going on for several months during which the employers stated again and again that they were willing to negotiate on wages and hours but could not consider a union shop agreement because they considered such an agreement as but little short of a closed shop. To meet the labor threat in that section of Washington the operators of some 35 warehouses and packing plants have formed the Tree Fruits Labor Relations, Inc.

AMERICAN FRUIT GROWER WILL HELP YOU!

Working for the protection of the fruit industry, AMERICAN FRUIT GROWER plans to introduce resolutions at important winter meetings calling for the formation of special Labor Relations Committees to aid growers in combating labor "racketeers." Individuals or groups of growers, desiring advice or further information on organizing to meet the growing labor menace, should write at once to AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleveland, Ohio.

Editorially Speaking

FACTS AND FANCY

THERE is no proper substitute for facts and truth. This is true anytime but it is of the greatest importance in abnormal times such as we now are entering. Those who mold public opinion, those who teach and advise both the young and old, should be most scrupulous in these matters. Much gossip goes the rounds, statements without evidence of facts are published in newspapers and elsewhere, all of which adds to misguided thinking and prejudice. Part of this is due to provincialism, some of this is due to political animosities, some of this is due to ignorance. One, therefore, is forced to examine with care the source of statements and the reputation of that source to ascertain that it has these precious qualities, facts and truth.

The AMERICAN FRUIT GROWER invites authorities in all fields to prepare articles for its readers and to attempt to verify statements that are made in its columns. If, as individuals, we all tried to verify all statements about other persons, or about public situations before repeating them, what a glorious place this would be in which to live!

LOOK AHEAD BUT PLAN CAREFULLY

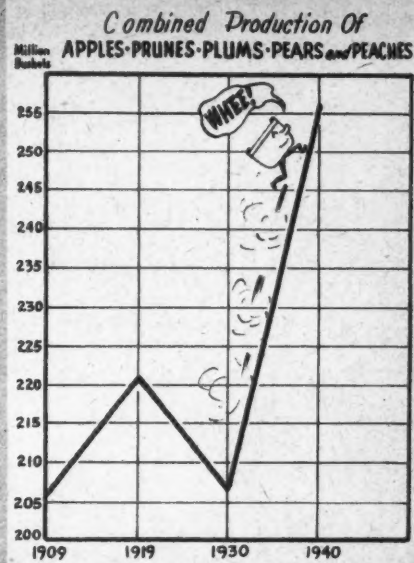
GONE is the shiny trim in new model automobiles and with it a lot of finery, frippery and gewgaws which have crept almost unnoticed into our lives. Since these are hard days, days which require careful planning, it is the time for intelligent use of our resources, materials, supplies, and equipment wherever possible. Fruit is playing an important part in the building up of the nation's nutrition and efficiency. It takes a lot of labor, much expensive machinery and equipment as well as huge quantities of insecticides, fungicides and fertilizers to produce high-quality, clean, wholesome fruit. Shortages of nearly everything needed in fruit growing are threatened. It is time, therefore, to examine the orchard and to see if savings cannot be made in next year's operations. One less nail in each box of fruit, for instance, multiplied a million times means a substantial saving of that precious war material—steel.

WHAT GOES UP, MUST COME DOWN

WILL price control legislation work to the benefit of farmers by curbing inflation? We think it will. What goes up, must come down and during the coming down process the farmer suffers. Although farm prices climb more quickly than other commodity prices during inflation, making the farmer prosperous, they dive faster than other prices during deflation taking away what the farmer gained during inflation and more besides. Net result is farmers are left holding the bag. If price control legislation can check inflation and the disastrous consequences of deflation, it deserves the support of every farmer.

ORDER SUPPLIES AND EQUIPMENT EARLY

IF YOU need new equipment for the coming year, order it early. Amidst the confusion created by priorities and manufacturing allocations, one cannot predict with any certainty just what amount of farm machinery and equipment will be available for 1942. The farm equipment industry is doing everything in its power to provide the machines needed, and new equipment will be forthcoming. Just how much, however, is the question. To protect yourself and your farm production, get your order in early. The same applies to insecticides and spray materials—order early.



"MY COUNTRY 'TIS OF THEE"

CLAUDE R. Wickard, Secretary of United States Department of Agriculture, urges all growers to repair farm machinery and equipment now inasmuch as the Government is taking steps to provide as much steel and other metal as may be needed for all necessary repairs of farm machinery in 1942. He suggests that every grower (1) checks over old machinery, (2) orders necessary parts from a dealer, (3) and, if parts cannot be obtained, notifies the County U.S.D.A. Defense Board.

THE way growers have been planting peach trees during the past few years is illustrated by U.S.D.A. figures which show an increase of 70 per cent in the number of young, non-bearing trees within the past five years. Despite the huge crop of this season, prices averaged 10 cents higher this year than last year. This does not take into account, however, peaches which never were brought to market.

MATERIALS necessary for the production of parts for the repair and maintenance of farm equipment and machinery have been given a full defense rating by the priority officials. Materials for the production of vital new farm machinery have been given the highest civilian rating.

LOOK for the formation of a National Peach Council which in many respects will be similar to the National Apple Institute. The meeting of peach growers and representatives of retail organizations in Richmond last month to discuss a national organization to help promote peaches was highly successful. There has been an honest-to-goodness need for such an organization and our guess is that it will grow as fast as the Apple Institute.

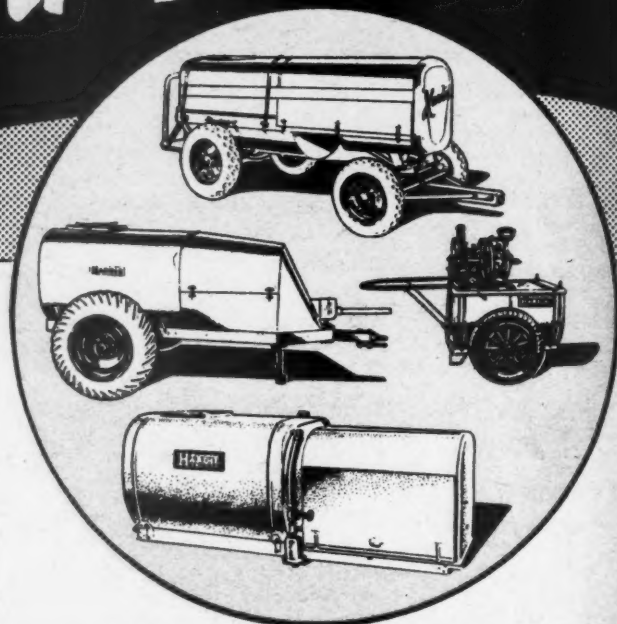
GROWERS in the East Tennessee Valley are fighting the Tennessee Valley Authority, which is determined to build a dam across the French Broad River. This would cover up a good share of one of the most fertile valleys in Tennessee. T.V.A. says that the dam is necessary for more power for national defense. Growers say that dams can be built elsewhere, covering up less fertile land and yet giving the additional power.

SOUTHERNERS like to fight. Witness the city of Morley, Tennessee in which all men eligible for the army have volunteered. The Selective Service Board in this town has had no draftees.

YOU GET MORE THAN YOU EXPECT

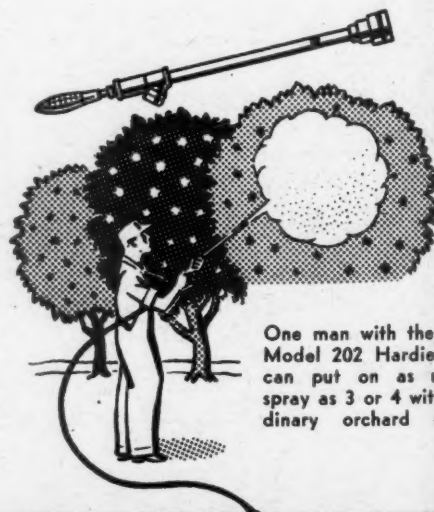
It's the NEW improvements, the UNUSUAL features of design and construction, the EXTRAORDINARY performance that surprise and please you when you take your new Hardie Sprayer into orchard or grove. For any Hardie is much more than merely a sprayer. Exclusive Hardie features save much labor, time, money. Fewer men can do the job with a Hardie.

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The new Hardie Model 202 spray gun delivers as much spray liquid through a single nozzle as can be done with an 8 to 14 multiple-nozzle head, and is far easier to handle and control.



One man with the new Model 202 Hardie gun can put on as much spray as 3 or 4 with ordinary orchard guns.

HARDIE

The **ONLY** Spray Pump that is
COMPLETELY LUBRICATED

Dependable Sprayers



Typical one-year trees of six varieties. Left to right: Jonathan, Stayman, Wolf River, McIntosh, "False Baldwin," and Baldwin. Many branches in Jonathan are common but by no means always present. The slight leaning of Stayman is characteristic. The leaf pose of Wolf River and of McIntosh differs and is easily distinguishable. The "False Baldwin" and Baldwin are much alike.

DO YOU KNOW YOUR APPLES?

By J. K. SHAW

Massachusetts State College

ALL good fruit growers know the varieties they grow by the apples, and many know them by orchard trees, but few would know the same varieties if they saw them in the nursery. Yet, it is as easy to recognize varieties by the one-year old trees in the nursery as by the fruit from orchard trees. Fruit growers are very familiar with the apples but they are not accustomed to seeing and to handling nursery trees. Most nurserymen know varieties by the nursery trees better than by the fruit; yet, just as fruit growers occasionally sell their apples under an incorrect name, so do nurserymen sometimes grow and sell trees not true to name.

The number of trees finding their way into orchards under incorrect names is now far less than it was 20 years ago. This is due largely to the work of four men from the Massachusetts State College and of a few others in this country and Canada who have been visiting nurseries in the Eastern part of the United States and Canada, weeding out misnamed trees at their source.

The percentage of misnamed trees never was large though frequently a few varieties were badly mixed. In some cases, all trees of a variety were grown under a wrong name. For example, one nurseryman thought he was growing Baldwin whereas he was growing Wealthy and fruit



Typical two-year trees of three varieties. Left to right: Black Twig (or Paragon), Stayman and Delicious. Black Twig and Paragon are much alike.

growers somewhere must have been disappointed to find that their orchards bore Wealthy instead of the Baldwin.

Mixtures in budded trees are easier to detect than among grafted trees but mixtures in grafted trees are more common, probably because of the opportunity for mistakes in the grafting room. In budded trees we usually find mixtures in groups of about six to 10, being the buds from a single stick, while among grafted trees they appear usually as single trees. Moreover, grafted trees do not grow as well the first year as budded trees and weak-growing trees do not show varietal characteristics as well as vigorous trees. Where a block of grafts has not grown well, it is sometimes hardly worth while to go over them because so many of

the trees have not grown vigorously and, consequently, are difficult to identify.

If a mixture gets into a nursery row, it will be propagated until someone discovers it. Mixtures have been propagated thusly for many years. If nurseries are examined carefully each year, mixtures are found the first year they get in. Buds from bearing trees generally are believed to be less likely to be mixed than those out in the nursery.

No one can learn to know varieties except by first-hand observation of the trees. It is a popular idea that we do it by the leaves, but that is only part of the story. The color of the bark, the number, size, color, and shape of the lenticels which are the small light-colored dots on the bark

(Continued on page 17)

CAMERA

AT NATIONAL PEACH COUNCIL MEETING



Chatting at the recent meeting at Richmond, Virginia, were: Chesley A. Haden, Crozet, Va.; Leo Mehler (standing), High Peak Orchard, Inc., Monroe, Va.; Lionel Newcomer, Boyertown, Pa., and A. W. Burfott, Crozet, Va.



Top—William C. Ockey, Economist, U.S.D.A. (left) talks with A. H. Teske, Extension Horticulturist, University of Virginia. Above—"A peach grower's family," Mr. and Mrs. B. D. Pennington, and D. E. Pennington, Brodnax, Va., growers.

Right—Seated at the table left to right are: Dave Perrine, Centralia, Ill.; Carroll Miller, Martinsburgh, Va.; F. W. Beneway, Ontario, N. Y. Left to right standing: W. C. Ockey, U.S.D.A.; C. B. Denman, Washington, D.C.; Earl French, Atlantic Commission Co.; A. F. Vierheller, College Park, Md. Extreme right: F. W. Beneway (left) and W. S. Campfield. Below at left: J. H. Seymour, Brodnax, Va. Center: Dr. F. P. Cullinan (left) reads paper with H. G. Linton. Right: H. H. Duncan (left) Rochester, N. Y., talks to W. G. Meal, U.S.D.A.





It is generally admitted that a progressively greater proportion of fruit is smaller in size and less attractive in color as the tree thickens. This tree is a typical example of where pruning has been delayed to the point where the fruit has reached this unsatisfactory condition. Pruning should not be delayed too long.

LONG-RANGE ECONOMY IN PRUNING

By

FREEMAN S. HOWLETT

Ohio Agricultural
Experiment Station

ALTHOUGH pruning is not the most expensive of orchard operations, it represents from five to 10 per cent of the total cost of producing a bushel of fruit. For that reason it behooves the fruit grower to keep the cost of pruning at a minimum. It is pertinent to note that no practice is less standardized than pruning. No other procedure is carried out to such an extent, according to the ideas of the individual orchardists and their workmen. This is true not only in the training of newly planted or young trees, but also in the care of bearing orchards. Years of service seem to be the chief qualifications for the pruner. However, pruning programs should be planned now to eliminate mistakes of the past since increased efficiency is also increased economy.

Developing a strong framework in the young tree seems to offer the greatest opportunities for future improvement. Too many laterals, developing on the young apple tree, frequently are allowed to become primary scaffold branches.

Sometimes the trees, when obtained from the nursery, have been headed back too drastically as whips, thus preventing the development of satisfactory vertical spacing of those laterals which are to comprise the primary scaffold branches. No outstanding improvement can be made in this connection until nursery trees are headed higher and until fewer laterals are allowed to form the primary scaffold system. Until these higher headed trees are available, limitation of the number of primary scaffolds to four would seem reasonable.

Narrow crotches, too weak to hold satisfactory crops are found too frequently. The recent windstorm in Ohio broke branches of young peach trees with no crop but, in some instances, they would have been saved

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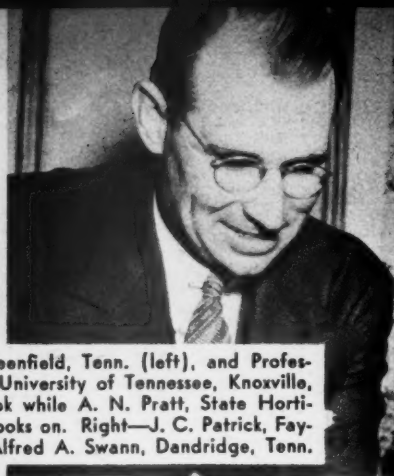


Above—Mature bearing Rhode Island tree before pruning. The fact that a tree will not cease to bear, if pruned biennially or even triennially, is responsible for the tendency observed frequently in the East to prune at irregular intervals. Below—Same tree after modern pruning, designed for long-range economy.





Left—R. R. McUmber, Greenfield, Tenn. (left), and Professor G. M. Bentley, of the University of Tennessee, Knoxville, Tenn., page through a book while A. N. Pratt, State Horticulturist, Nashville, Tenn., looks on. Right—J. C. Patrick, Fayetteville, Tenn. (left) and Alfred A. Swann, Dandridge, Tenn.



John E. Roberts, Memphis, Tenn. (left), has some interesting things to say and his pointed finger is emphasizing his point. John E. Roberts, Jr., Whitehall, Ark., listens on with much attentiveness.



Right to left—Mrs. L. A. Fister, Jackson, Tenn.; Mrs. Thomas Anderson, Toone, Tenn.; Mrs. R. R. Dulin, Brownsville, Tenn.; Mrs. M. W. Robinson, Bolivar, Tenn.; and Mrs. C. H. Rochelle, Kenton, Tenn.



Miss Melba Sowell, Nashville, Tenn., Secretary to A. N. Pratt of Nashville, takes Professor M. W. Robinson's signature. He is from Bolivar, Tenn.



Left to right: Charles E. Heckle, Memphis, Tenn.; Grady Barnes, Cherry Valley, Ark.; H. V. Berry, Greenfield, Tenn.; E. P. Douberry, Greenfield, Tenn.; and J. M. Allison, Shelbyville, Tenn.

CAMERA

AT TENNESSEE STATE HORTICULTURAL SOCIETY MEETING

ATTRACTED by a well-balanced program covering important topics, some 75 representative-growers attended the two-day 37th Annual Convention of the Tennessee State Horticultural Society at Jackson, Tennessee, November 18 and 19.

Following the closing session Wednesday afternoon, November 19, members were taken on a tour of the Experiment Station orchard and the C. D. Crider orchard. Pruning demonstrations were held as well as a demonstration of the latest method for baiting orchard mice.

New officers of the Tennessee Society were elected at the meeting and are as follows: D. E. Hedges, Signal Mountain, President; J. E. List, Sale Creek, Vice-President for Eastern Tennessee; Horace Rainey, Columbia, Vice President for Central Tennessee; Thomas Anderson, Toone, Vice-President for Western Tennessee; Professor G. M. Bentley, Knoxville, Secretary-Treasurer.

RECENT FINDINGS ON STORAGE DISORDERS OF THE APPLE

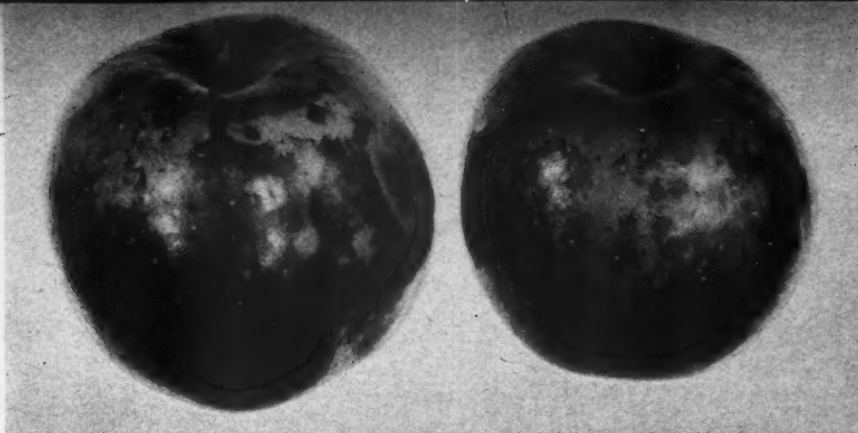
By ROBERT M. SMOCK
Cornell University

PROBABLY the most universal and troublesome storage disorder is scald. Workers in the United States Department of Agriculture in 1918 found that this trouble was caused by accumulations of certain gases which the fruits exude. They found that ventilation with fresh air would sweep these troublesome gases away. They also discovered that paper impregnated with mineral oil would control the trouble. The mineral oil actually dissolved the gases causing the disease. The use of shredded oiled paper or oiled paper wraps has been very common since that time.

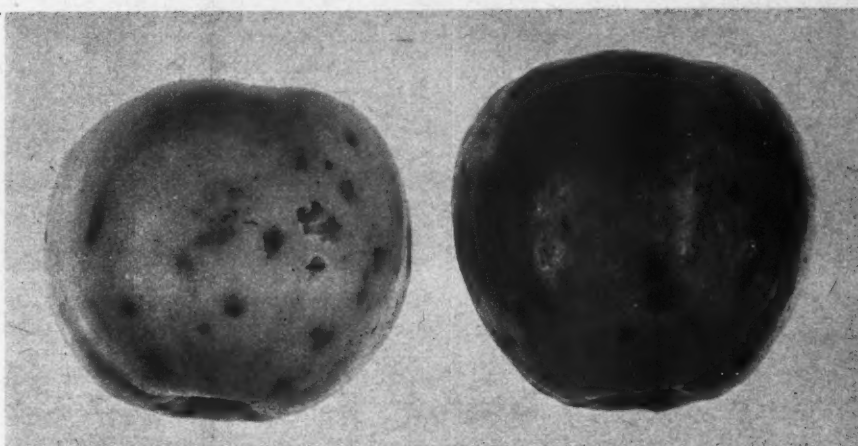
Bitter pit or stippen is a serious storage trouble on varieties like Baldwin, Northern Spy and Rhode Island Greening. Recent research work at Cornell University seems to emphasize that the disorder is a result of an abnormal water relationship. Evidence seems to indicate that leaves and fruit compete for water on the tree and, when the leaves take more than their share, susceptibility to bitter pit is likely to be increased. The only treatment which practically eliminated susceptibility was defoliation of single limbs. It was found that excessive use of nitrogen, ringing of limbs after full bloom, very heavy thinning, and shading all seem to increase susceptibility to this disease. There is little the fruit grower can do, since he cannot control the water supply, other than store his fruit at a low temperature. Storage at 32° F. is much to be preferred over higher temperatures from the standpoint of this disease.

Soft scald differs from scald in that it produces blister-like sunken areas that extend in irregular patterns over the fruit. Soggy breakdown is a type of flesh collapse which is different in its expression but similar in cause to soft scald. It was found that these troubles were specifically low tempera-

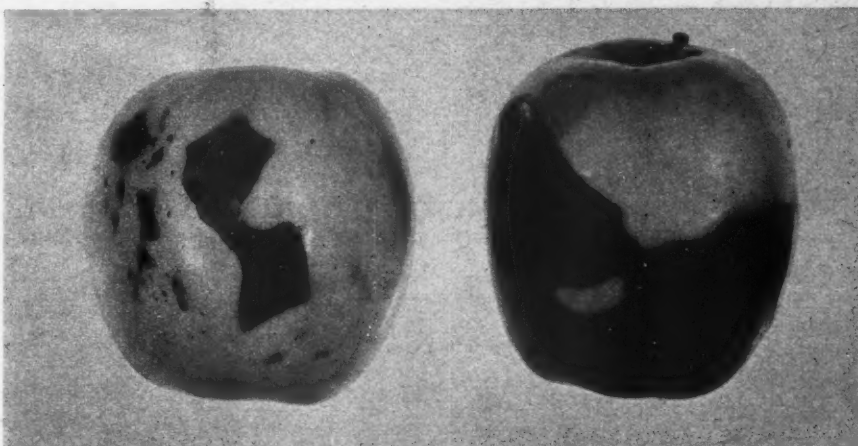
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Storage scald, one of the most universal disorders, on Rhode Island Greening.

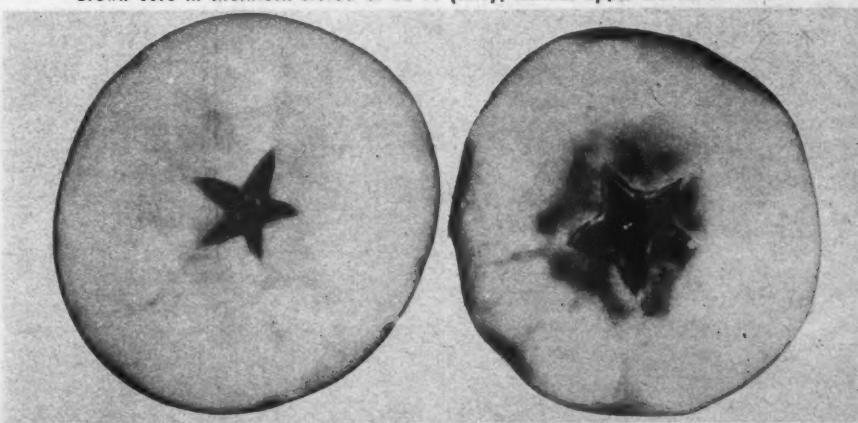


Bitter pit, result of abnormal water relationship, on Baldwin and Northern Spy.



Soft scald, a specifically low temperature disorder, on apples in storage.

Brown core in McIntosh stored at 32°F. (left); normal apple stored at 40°F.



STATE NEWS

DELAWARE—Mrs. R. Jane Cunningham, Cambridge, Maryland, President of the Peninsula Horticultural Society, will be hostess to



Mrs. R. Jane Cunningham

an illustrious list of guests at a banquet on the second evening of the Society's annual meeting, December 10. Governor Herbert R. O'Connor and Senator George L. Radcliff of Maryland; Governor Walter W. Bacon of Delaware; ex-Governor Emmerson C. Harrington of Maryland; and Mr. Curley Byrd, President of the University of Maryland, are a few of the notables who will be attending the banquet.—T. F. MANN, Sec'y, Newark.

RHODE ISLAND—The Rhode Island Fruit Growers Association offered a prize for the best apple display during National Apple Week. It was won by the Providence Public Market of Providence with a display of fine apples and apple products. An important feature was the appeal for use of apples on the basis of health.—E. P. CHRISTOPHER, Sec'y, Kingston.

INDIANA—Twelve Hoosier growers will receive medals as a result of their qualification in the Quality Plus Apple Club. Gold medals will be given to 11 who produced, on commercial acreages, crops which graded 92 to 98 per cent U.S. No. 1 by free run sample. With slightly less than 90 per cent U.S. No. 1 crop, a twelfth grower will receive a silver medal.

Gold medal winners are: L. V. and L. J. Doud, father and son, Wabash; P. D. Baldauf Orchard, Rush Rickard, Mgr., Cloverdale; R. W. Gregory, Orchard, Morrisville; Roy Tuttle, Greenfield; Lester Musgraves, Bloomington; Bristol Orchard, V. V. Clarke, Mgr., Bristol; C. E. Scott, Yorktown; Martin Davis, Daleville; Sanford Fletcher, Middletown; Ferd Bolten, Linton; and Floyd Jacoby, Plymouth. The silver medal winner is Dr. F. A. Kennedy, Connersville. L. V. and L. J. Doud and V. V. Clarke have qualified for gold medals in three successive seasons and this is the second season in which Messrs. Jacoby, Bolten, Tuttle, and Rickard have grown Quality Plus crops.—MONROE McCOWN, Sec'y, Lafayette.

NORTH DAKOTA—R. L. Wodarz, Wyndmere,



R. L. Wodarz

no doubt deserves the title of North Dakota's most extensive orchardist. Mr. Wodarz has over five acres, planted to apple and plum trees. Varieties of apples which usually are not believed hardy have been fruited successfully in this planting. McIntosh, Kendall, Wealthy, Perkins, Milton, Red Flesh, Virginia, Dolgo, Mercer, Lobo, Haralson, and Prairie Spy are some of the sorts. Tender varieties, such as McIntosh, Perkins and Kendall, are topworked on Malus baccata. This topworking appears to explain in part Mr. Wodarz's success with some of the tender varieties. Of the varieties listed, Mr. Wodarz considers Perkins his favorite.—HARRY A. GRAVES, Sec'y, Fargo.

CONNECTICUT—At the Connecticut Pomological Society annual meeting, Garde Hotel, Hartford, December 11-12, upon the request of the program committee and other fruit growers, considerable time will be spent in question box periods when such matters as "Insect and Disease Control," "Orchard Soil Management" and "Harvesting and Marketing Problems" will be discussed. The Society's program lists eminent speakers from all parts of the country.—H. A. ROLLINS, Extension Fruit Specialist, Storrs.

OHIO—The Fruit Growers School which has held annual meetings for the past 12 years during the first week of December at Ohio State University will not meet this year because many Ohio fruit growers and members of the Horticultural Staff at Ohio State University and at the Ohio Experiment Station desire to attend the American Pomological Society meeting which is being held in conjunction with the Michigan State Horticultural Society meeting at Grand Rapids, Michigan, December 2-4. It is expected that meetings of the Fruit Growers School will continue next year.—FRANK H. BEACH, Sec'y, Columbus.



R. G. Phillips

ill on October 9 while he was visiting near Kingston.

UTAH—A new agricultural marketing service has been set up to assist Utah fruit and vegetable growers with their marketing programs. This organization consists of leading growers who represent various commodities and members of the Utah State Agricultural College faculty. Activities the first year will be confined to fruits and vegetables but the inclusion of other agricultural products is planned for later consideration.

The present program, now under way, is concerned with the collection of information from shippers and receivers of Utah produce. Personal contacts are being made with dealers at the receiving points in an effort to learn what the various markets want in the way of varieties, quality and type of packaging and handling. In addition to the wholesale outlets, the retail trade also will be visited in an effort to obtain as much information as possible on consumer preferences and demands.

The marketing service activities were made possible through the contribution of a business organization interested in the development of a profitable fruit and vegetable industry in Utah.—A. STARK, Sec'y, Logan.

WASHINGTON—During harvest in the Yakima Valley apple country former cotton pickers and drifting laborers became skilled in apple packing by practicing on wooden "apples" in a school at the Farm Security Administration's Yakima migrant labor camp. How to grade, wrap and pack apples and how to put the lids on boxes were parts of the "course" which was presided over by a W.P.A. instructor.

CALENDAR OF COMING MEETINGS and EXHIBITS

Dec. 1-3—Washington State Horticultural Society 37th annual meeting, Wenatchee.—John C. Snyder, Extension Horticulturist, Pullman.

Dec. 2-3—Western Nut Growers Association annual meeting, Salem, Oregon.—O. T. McWhorter, Corvallis.

Dec. 2-4—New Jersey State Horticultural Society annual meeting, Haddon Hall, Atlantic City.—Arthur J. Farley, Sec'y, New Brunswick.

Dec. 2-4—Joint meeting of the Michigan State Horticultural Society and the American Pomological Society in connection with the Michigan Apple Show, Civic Auditorium, Grand Rapids.—H. D. Hootman, Sec'y, Lansing.

Dec. 4-5—Kansas State Horticultural Society annual meeting, Lawrence.—Geo. W. Kinkead, Sec'y, Topeka.

Dec. 5-6—Montana Horticultural Society annual meeting, Hamilton.—Geo. L. Knight, Sec'y, Missoula.

Dec. 9-11—Virginia State Horticultural Society 46th annual meeting, Roanoke.—W. S. Campfield, Sec'y, Staunton.

Dec. 10-12—Peninsula Horticultural Society, annual meeting, Cambridge, Maryland.—T. F. Mann, Sec'y, Newark, Del.

Dec. 10-11—Oregon State Horticultural Society annual meeting, Eugene.—O. T. McWhorter, Sec'y, Corvallis.

Dec. 11-12—Connecticut Pomological Society annual meeting, Hartford.—H. A. Rollins, Extension Fruit Specialist, Storrs.

Dec. 17-19—Illinois State Horticultural Society annual meeting, Urbana.—Joe B. Hale, Sec'y, Kell.

Dec. 29-31—American Society of Horticultural Science, Dallas, Texas.—H. B. Tukey, Sec'y, Geneva, New York.

Jan. 5-6—Maryland State Horticultural Society 44th Annual Meeting, Hagerstown.—A. F. Vierheller, Sec'y, College Park.

Jan. 7-9—Massachusetts Fruit Growers Association annual meeting, Worcester.—William R. Cole, Sec'y, Amherst.

Jan. 13-15—Indiana State Horticultural Society annual meeting, Purdue University, Lafayette.—Monroe McCown, Acting Sec'y, Lafayette.

Jan. 13-16—New York State Horticultural Society annual meeting, Rochester.—Roy P. McPherson, Sec'y, Le Roy.

Jan. 13—Vermont State Horticultural Society annual meeting, Memorial Auditorium, Burlington.—Charles H. Blasberg, Sec'y, Burlington.

Jan. 20-22—Maine Pomological Society annual meeting, Lewiston.—E. L. White, Bowdoinham.

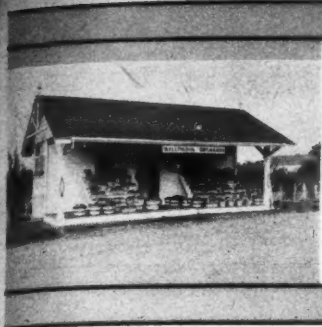
Jan. 20-22—Pennsylvania State Horticultural Association annual meeting, Harrisburg, in connection with the Pennsylvania Farm Show.—John U. Ruef, Sec'y, State College.

Jan. 26-28—Annual winter meeting of the Ohio State Horticultural Society in connection with the Annual Farmers' Week of Ohio State University, Columbus.—Frank H. Beach, Sec'y, Columbus.

Feb. 3-5—Nebraska Horticultural Society annual meeting, Lincoln.—E. H. Hoppert, Sec'y, Lincoln.

Feb. 11-12—West Virginia Horticultural Society's 49th Annual Convention, Martinsburg.—Carroll R. Miller, Sec'y, Martinsburg.

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MARKETING



BUILDS SALES ON HIGH-QUALITY AND HONESTY

By RICHARD T. MEISTER

A ROADSIDE market, more than 35 miles from a large town and located in an area where few people live, would seem to be a profitless proposition. Yet, Alfred Swann, owner of such a market plus some 3700 acres of fertile farm land of which 230 acres are in fruit, profitably sells a large part of his fruit crop at his roadside stand and every year he has made additions.

The market is located on highly-traveled Route 11, not far from Dandridge, Tennessee, and more than 35 miles from Knoxville. Two large billboard-like signs are located down the highway on either side of the stand and are the only indications the motorist has that he is approaching the market.

Swann sells all sorts of products at his roadside stand where, annually, he disposes of over 50 per cent of his peaches, 50 per cent of his grapes, 20 per cent of his apples, and all of his strawberries. Besides these fruits, he sells apple juice, cider, grape juice, tomato juice, cherry cider, home-made ice cream, tomatoes, green beans, apple butter, apple sauce, honey, molasses, choice hams, and blackberry juice. Best blackberry juice, says Swann, comes from wild blackberries of which he has a large field. Flavors of ice cream are vanilla, chocolate, blackberry, grape, peach, youngberry, mint and molasses. "I reckon this is one of the few places in the United States where you can get molasses ice cream," Swann said.

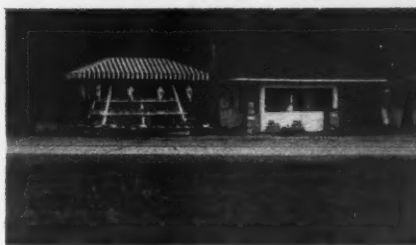
Biggest business at the stand is in apple juice because it is a year-round proposition. "One year," Swann said, "we ran out of cider and all sales at the market dropped 50 per cent." The value of cider or apple juice as a product to tempt customers into buying more cannot be disputed.

Swann never has gone in much for fancy packages. He wants his fruit to sell because of its own merit and not because of a dressed-up container. This is the secret of Swann's roadside marketing philosophy which is smart, practical and profitable. "We figure it pays to sell high-quality fruit," Swann said, "and to be honest with our customers. Our instructions are that 'if apples can't be the same all the way through the package' the larger apples shall be placed deliberately on the bottom instead of on the top. It pays in the long run." Modestly he said, "What little reputation we have depends on this."

Swann's policy is to get as close to the ultimate consumer as possible and this he is doing successfully at his roadside market. Never attempting to sell customers on bargain prices, he sells on quality and value. Cost of the fruit is midway between wholesale and retail prices. For instance, his best Delicious this year sells for 60



Left—An attractive stand at Alfred Swann's roadside market. Below—A large quick-freeze house is at right and an ice cream stand is between two fruit stands.



cents a peck, \$1.20 a half bushel, and \$1.85 a bushel.

Swann's roadside market is the product of careful planning and thought. "Whenever one item would pay for itself," said Swann, "we would start ahead on the next but in no case did we expand quickly; rather it has been a step-by-step procedure." Next step will be the building of a small sandwich shop for which a quick-freeze unit already has been provided.

So far Swann has had no difficulty selling fruit at his market. He is selling high-quality products and has found that customers are willing to go out of their way for quality. One motorist said he drove 50 miles out of his way to purchase some apple butter. Swann once tried advertising his choice hams by direct mail and sold 27 hams for every 100 letters. The demand soon exceeded the supply and he was forced to stop advertising. He never has tried advertising his fruit. He's afraid he may not have enough to supply the demand if he does.

There are only about two or three commercial boysenberry plantings in Tennessee. Growers claim the berries will not hold up in shipping but they are excellent for local trade or roadside markets.

Cars move pretty fast along U. S. Route 70 where Charles D. Crider has a promising young apple orchard, near Jackson, Tennessee. Mr. Crider knows that you must "stop 'em before you can sell 'em" so in midsummer he had clear, attractive signs painted with letters a foot or more high.

He is one fruit grower who believes in being prepared. When the orchard was set out, an attractive shrubbery planting was started at the site where he proposed to build his roadside market. The little work shed which was built when the orchard was set out now is ready to be the center of the market place. Successful roadside markets don't just happen. They are the result of careful, long-time and businesslike planning.—A. N. PRATT, Nashville, Tennessee.

Army purchasing of fresh fruits and
AMERICAN FRUIT GROWER



Above—C. L. Phillips, salesman at this Tennessee roadside market. His white uniform and the neatness of the stand indicate efficient roadside service.

vegetables now amounts to approximately \$1,500,000 monthly.

One hundred and thirty-five cars of apples have been purchased in Indiana by the Surplus Marketing Administration and the Federal Surplus Commodity Commission between September 10 and November 8.

The production of fruits for distribution in fresh, dried or canned form is expected to increase 1.4 per cent from 14.8 million tons this year to 15 million tons in 1942.

During the coming winter the Department of Agriculture plans to purchase nearly 4,000,000 boxes of citrus fruits. Offers to purchase will be made in all citrus-producing areas by the Surplus Marketing Administration and the prevailing market price will be paid when the purchases are made.

LONG-RANGE ECONOMY IN PRUNING

(Continued from page 9)

if the excessively narrow angles of diverging branches had been more carefully eliminated. The early years of the tree are exceedingly important and pruning then should be done only by those who know how to space branches vertically to the best advantage, how to improve the crotches of a tree, how to suppress undesirable growth, and how to select secondary scaffold branches. The time involved in labor during this particular growth period is relatively small but all emphasis must be placed upon skill.

Non-bearing trees in which the scaffold branches are well established usually are pruned very little. In this respect, most orchard practice shows little variation. Faulty framework may be improved by a discreet workman but this is no place for mass pruning by an inexperienced worker.

The fact that a tree will not cease to bear, if pruned biennially or even triennially, is responsible for the tendency to prune at irregular intervals. It is generally admitted that a progressively greater proportion of the fruit is smaller in size and less attractive in color as the tree thickens. So, until this result is apparent, pruning often is delayed. Frequently, pruning is relayed too long and mediocre fruit results.

The problem of pruning bearing trees is complicated chiefly by the problem of alternate bearing. Present knowledge indicates that alternate-bearing trees should be pruned in their "on" year. If it were known that annual pruning would insure annual bearing, even in the trees generally considered as annual in bearing but which show a slightly heavier crop in alternate years, then the recommendation would be simple but, since no pruning practice can be relied upon to maintain annual bearing, the practice of delaying the operation until the fruit becomes unsatisfactory is understandable.

Pruning of bearing apple and peach trees can be satisfactorily carried out if the supervisor knows his objectives. Few cuts on a bearing tree can be made in just one way and the chief danger there lies in overpruning rather than in underpruning. The recognition of crossing and rubbing branches, the heading back of those that are too high, together with the thinning out of small branches, does not require experienced skill, a circumstance which may allow certain economies at the present time. However, long-range economy can be secured by including in present pruning programs the herein mentioned features for improvement and, doubtless, more economy will be achieved in this

manner than in the sporadic system which depends too greatly on immediate labor supply or on the momentary condition of the orchard.

Actually those measures which will constitute a safe economy now might well be put into practice at all times. Certain adjustments to present needs and conditions may have to be made but, in general, orchard management is a business which seems to need its books balanced, not alone after the crop is harvested and sold but long before.

STORAGE DISORDERS

(Continued from page 11)

ture disorders. They can be avoided by using storage temperatures of 36 to 40° F.

Brown core or core flush is a trouble which is common in McIntosh in some sections. It, too, is a low temperature trouble. Storage at a temperature from 36 to 40° F. usually tends to eliminate this trouble.

Internal browning is a disorder of apples grown in certain sections and is particularly bad in the Watsonville section of California. Susceptibility seems to be closely associated with climatic factors prevalent during the growing season. Research in California has shown that this trouble does not occur when the fruit is stored at temperatures of 36 to 40° F.

Jonathan spot is very common in storage on Jonathan and similar varieties. Work in Iowa showed that, the riper the fruit, the more likely it was to develop this disorder. Recent work at Cornell University has shown that controlled atmosphere storage controls this trouble on Jonathan, however, in the presence of carbon dioxide this variety develops corkiness of the flesh so the adaption of controlled atmosphere storage is not entirely successful.

Rotting of fruit is always a troublesome disorder of apples in storage. By far the most common organism causing rot of apples is blue mold. Most of the infection from this organism comes through breaks in the skin of the fruit. The most practical answer to rot control, therefore, is to prevent stem punctures and all skin breaks.

Surface molds growing on the crates, the fruit and the walls are troublesome when relative humidity is high. Humidity should be kept at 90 per cent or thereabouts to check fruit shriveling. Yet at this figure molds may appear. Sterilizing the storage rooms and old storage crates is desirable. Work has revealed that the use of one to two parts per million of ozone in the storage atmosphere for an hour or two a day controls these surface molds.

IS YOUR SPRAYER READY FOR NEXT YEAR'S CROP?

By R. D. BARDEN

Extension Agricultural Engineer

BY FAR the largest number of problems with sprayers is tied up with difficulties in maintaining pressure. All spray rigs should be operated only at the pressure for which the manufacturer designed them. Since they are subject to constant wear, resulting from high pressures and corrosion due to the action of spray materials, careful checkup of valves, valve seats, plunger cups, and cylinder liners should be of first consideration in the care of the sprayer.

Following are 10 suggested places to check when your sprayer does not come up to or maintain the pressure required. Do not readjust the pressure regulator until you have checked the following:

1. Hole in gun disc which may be worn oversize or be too large for the capacity of the outfit. Try a new disc.
2. There may be air leaks in suction line from solution tank, either from a loose hose clamp, a missing hose nut gasket, a worn or broken suction hose.
3. Check frequently the suction screen in the solution tank and occasionally clean out the tank.
4. Drain cocks not fully closed, admitting air.
5. Foreign matter may be lodged on regulator valve seat so that the valve ball is not seating properly.
6. Gaskets underneath pump valve seats or cages may be missing or defective.
7. A checkup on the valves is occasionally necessary.
8. Valve seats or valve balls in base may be worn out.
9. When the plunger shows a leak, there is usually a worn cup.
10. If pressure is uneven or hand on pressure gauge fluctuates, it would indicate an air leak or an intake or discharge valve in the base as not seating properly.

Many problems of improper sprayer operation arise from carelessness in putting up the sprayer for winter months. Many of the spray materials used are quite corrosive to metals and for that reason it is wise to flush out the sprayer thoroughly at the end of each day's work. This can be done by pumping fresh water through all the sprayer parts, letting it flow until the discharge from the gun comes out clear. On sprayers where it is possible to remove the suction line from the tank, this can be done easily. On sprayers where the suction line cannot be removed from the tank, it is advisable to tap onto the suction line so that fresh water may run through the sprayer and clean out all the valves and lines.

When the sprayer is stored for the winter months, care should be taken to see that all parts of the sprayer are free from water. This can be done by removing all drain plugs from the lower line and from the pump. Removal of the cylinder heads in many cases will assure that all water has been drained out of the pump. Before starting the engine again, turn the pump over by hand, cranking the engine to make sure that all parts are free.

To prevent the plungers from drying out and to prevent all parts of the pump from corrosion at the end of the season, pump some oil through the sprayer. This is a good practice if all spray solution has been washed out before the oil is put through the pump. Many operators prefer to use a dormant spray oil as protection for their sprayer during the winter months. In such cases, all water pockets should be drained before the oil is put in so that no damage will result from freezing.

Each year all replacements and repairs should be made before the sprayer is put away so that it will be ready to go to work when the time comes.



TODAY, more than ever, it is important to produce a bigger, better food supply. More than 3 billion dollars yearly has been wasted due to damage caused by insects and plant diseases. Do your share in preventing this waste by protecting your crops with insecticides and fungicides.

Du Pont is constantly fighting the war against insect enemies, *first* by developing and producing effective, economical pest controls. To this end du Pont research is continually engaged in testing hundreds of compounds for possible use as insecticides, fungicides and other pest controls.

A *second* job is to furnish growers with adequate supplies of pest controls considered essential to good food production. *In this*

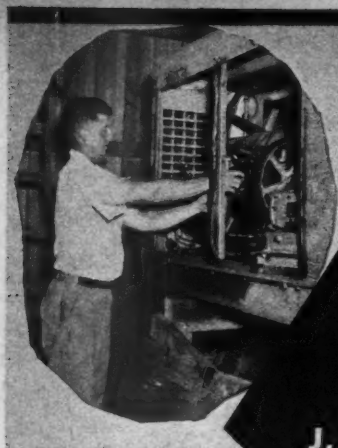
respect we have anticipated growers' requirements, and at present foresee no scarcity of Du Pont Insecticides and Fungicides. However, future shortages cannot be predicted, and we recommend that you place your orders early . . . to assure yourself an adequate supply.

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*GRASSELLI Spreader-Sticker	Paris Green
*LORO Contact Insecticide	Copper-A Compound
Calcium Arsenate	Flotation Sulfur Paste
*PARAPONT Paradichlorobenzene	Bordeaux Mixture
Zinc Sulfate—Flake and Crystal	*BLACK LEAF "40"
*PARMONE Hormone Spray	*BLACK LEAF "155"
Cryolite (precipitated)	*FLUXIT Spreader

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Iron Age
sprayer"**

**J. A. SWING,
WINCHESTER,
VA.**

When Mr. J. A. Swing says, "I have not had a single penny's repair cost on my Iron Age sprayer," he means every word of it. For Mr. Swing thinks this is a fine recommendation for any machine that gets the hard usage he gives it spraying eighty odd acres of orchard in his 140-acre farm near Winchester, Va.

Mr. Swing has a skid type sprayer with a 400-gallon tank and a 20-gallon high pressure Victory pump. To him, one of the particularly pleasing Iron Age features is the screen which keeps residue from clogging up the spray gun. "I am well satisfied with my Iron Age," he says.

Mr. Swing is not alone in his feelings about the service and dependability of Iron Age sprayers. Growers everywhere praise the cost-cutting performance of Iron Age . . . their crop's best insurance. There's an Iron Age sprayer for every orchard or grove operator—write for catalog.

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PEACH GROWERS MEET AT RICHMOND

MEETING at Richmond Wednesday, November 12, representatives from eight peach growing states voted to establish a National Peach Council to promote the profitable marketing of the nation's peach crop. A seven man committee was appointed to draw up a plan for the formation of the Council which will be submitted to growers for their approval at state horticultural society meetings.

Named on the committee were: Chesley Haden, Crozet, Va.; D. S. Mathieson, Raleigh, N. C.; Frank Beneway, Ontario, N. Y.; Stanley Fulton, Hancock, Md.; Lionel Newcomer, Boyertown, Penn.; Carroll Miller, Martinsburg, W. Va.; and Lester Collins, Moorestown, N. J. Missing at the meeting were representatives from South Carolina and Georgia.

The one-day meeting was called by Carroll Miller, Secretary of the Temporary Peach Merchandising Committee, formed last June at Columbus, Ohio. At the meeting Dr. W. C. Ockey of the United States Department of Agriculture exhibited figures, showing there has been an upward trend in peach production which will continue for some time unless there is a tremendous pulling out of trees. This year's crop, close to 70 million bushels, was the second largest in the nation's history. Reason for the increased production is the heavy planting of trees within the last five years, many of which are not yet in bearing. Some sections are greatly overplanted.

Because of this and because of the fact that large peach crops must be marketed in the short space of 10 weeks, a definite need was established for a National Peach Council. The committee, appointed at the meeting, now must draw up a program to present to growers. One of the most difficult problems is the question of how to raise funds to support the Council. Whether this will be done by voluntary contributions from each state, by contributions from individual growers, or by an assessment on each bushel, remains to be determined.

Other speakers at the meeting were: W. G. Meal, Director Agricultural Marketing Service, U.S.D.A.; Dr. F. P. Cullinan, peach expert, U.S.D.A.; Earl R. French, Atlantic Commission Company; C. N. Palmer, United Fresh Fruit and Vegetable Association; D. B. Perrine, Centralia, Ill.; W. S. Campfield, Staunton, Va.; A. F. Vierheller, College Park, Md.; A. H. Teske, Extension Horticulturist, University of Virginia; and C. B. Denman, National Association of Food Chains.

DO YOU KNOW YOUR APPLES?

(Continued from page 7)

of one-year wood, as well as the type of growth of the tree are characteristic of the variety and are quite constant on any one variety. The single leaves of different varieties differ in size, shape, color, amount, and type of folding and curving of the leaf blade. The last is what most often first attracts attention when there is a stray variety in the nursery row. The size, sharpness and other peculiarities of the serrations or notches on the leaf edge are most useful in identification of varieties. Serrations vary within most varieties only within rather narrow limits and variations generally are due to varying vigor and can be allowed for. We usually fix in our minds three or four characters of a variety that are most constant and then depend on these to know if a variety is true to name.

Sweet cherry varieties have been mixed as badly or worse than apple varieties but they can be identified quite easily in the nursery. Sour and Duke cherry varieties have fewer mixtures, perhaps, because there are fewer varieties grown in the nursery. Only three sour cherry varieties and few Duke varieties are grown commonly. Montmorency and Early Richmond are much alike and the problem of these varieties is further complicated by different strains of Montmorency which seem to differ slightly among themselves.

Pear and plum varieties are less mixed than apple and sweet cherries but some varieties resemble each other rather closely and occasional mixture or misnamed varieties are found.

Peaches are much more difficult. No means of distinguishing certain varieties have been found. It is significant that such varieties are much alike in fruit as well as in nursery trees. It may be wise for peach nurserymen to go back occasionally to orchard trees for buds.

We have made no attempt yet to study grape and small fruit varieties. These usually are not grown extensively by tree fruit nurserymen but by other men in other localities. There is no doubt that a study of small fruit varieties would show characters by which varieties could be identified as surely as fruit tree varieties are.

Anyone may learn in a few minutes to know the difference between the nursery trees of two varieties. Many nurserymen or their old employers know varieties very well. They may be able to recognize varieties in storage without their leaves or even by the type of root system. As the number of varieties increases, the task becomes more difficult.

DECEMBER, 1941

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Gentlemen: I want the full story on the units checked below. No obligation to me. I have _____ acres.

☐ Orchard Model M 32 horsepower. ☐ HD-7 2-cycle Diesel 60 horsepower. ☐ Model B Wheel Tractor "For All Jobs in Small Groves, For Small Jobs in Big Groves." ☐ Implements.

Name _____

Town _____ PLEASE PRINT

State _____ R.F.D. _____



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Why put up with years of needless discomfort and worry? Try a Brooks Automatic Air Cushion. This marvelous appliance permits the opening to close, yet holds reducible rupture securely, comfortably—day and night. Thousands report amazing results. Light, neat-fitting. No hard pads or stiff springs to chafe or gouge. Made for men, women and children. Durable, cheap. Sent on trial to prove it. Never sold in stores. Beware of imitations. Write for Free Book on Rupture, no-risk trial order plan and proof of results. Correspondence confidential.



BROOKS COMPANY, 104 State St., Marshall, Mich.
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Standard Tractors

Powerful 1 and 2 Cylinder Tractors for Small Farms, Gardeners, Florists, Nurseries, Fruit and Poultrymen.

FOUR MODELS
Ample Power for Field, Haying and Truck Crop Tools. Run Pumps, Saws and Belt Machines.

Steel or Rubber Tires High Wheels—Enclosed Gears

LOW PRICES
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Minneapolis, Minn. New York, N.Y. Philadelphia, Pa.
2811 Como Av. 637 West 26 St. 1914-20 Fairmount



Rollin H. White receives a bronze plaque from Cletrac employees, presented by his son, W. King White, President.

CLETRAC CELEBRATES 25th ANNIVERSARY

IN HONOR of its 25th Anniversary, the Cleveland Tractor Company recently entertained 5,000 employees and their families. Started originally as the Cleveland Motor Plow Company by Rollin H. White, who now is Chairman of the Board of Directors, the Company has progressed and grown steadily and at present is manufacturing parts for tanks and other defense units and building high-speed military trac-

tors for the U. S. Army.

In commemoration of the Anniversary, Mr. White was presented with a bronze plaque as a testimonial from the Company employees. He also received a 25-year service pin. A similar pin was awarded to E. N. Sawyer, former Works Manager of the Company, who still is associated with Cletrac. No less than 36 other 20-year veteran employees have received service pins.



**MT. PLYMOUTH HOTEL
&
GOLF CLUB**

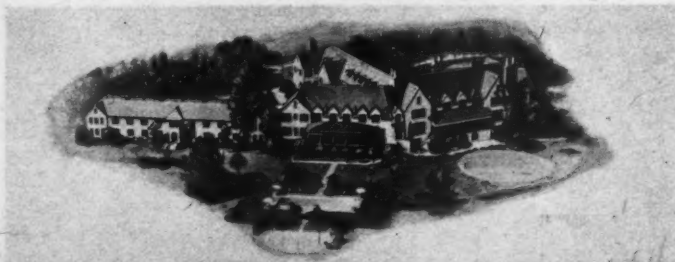
MT. PLYMOUTH FLORIDA

Open January 1 to April 1

Sensible Rates—Restricted Clientele

18 hole Championship Golf Course	125 Rooms. Modern Building
Watered Fairways & Grass Greens	Sprinkler System
Outdoor Swimming Pool	Steam Heat in Every Room
Best Fresh Water Fishing	Private or Connecting Baths
Airport	Pure Artesian Well Water
19th hole. Bar & Cocktail Lounge	Fruit Juices Served Free. Our Own Groves

Write for folder and rates—JOHN D. BROOKS, Manager





**STRAWBERRIES
PAY**

Allen's Berry Book describes best early, medium, late and overbearing varieties. Tells how to grow big, juicy berries for home and market. Copy Free Write Today.

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ACME GRAFTING COMPOUND
Endorsed by Michigan State College. Moderately priced and applied cold with a brush. Used also as a protective coating for injury. Send for price list. Dealers wanted.
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BLUEBERRIES A PROFITABLE ORNAMENTAL
Be the first to raise QUALITATED BLUEBERRIES. The coming sensation. Very ornamental. Example: blue blossoms; leaves change from green to red; grows 4 ft. tall. Eat delicious jumbo sized berries with cream. Two to four bushes will supply average family with sweet, watering blueberry pies all season. Big money-maker for planters. Sell from 50c to 75c a quart. Fully described in our catalogue of over 100 real berries in plants, trees and shrubs. Write now. The Ackerman Nurseries, 100 Lake St., Bridgman, Mich.



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**BIG PROFITS
from SMALL FRUITS**

SCARFF'S Registered Raspberries are finest plants available anywhere. Better yields of quality berries—greater profits and satisfaction. Sensational new varieties: Blackcap Raspberry, Raspberry, large cultivated blueberries, Currants, Gooseberries, Seedless Concord Grapes, New Hardy Apicot, Dwarf Fruit and Hardy Nut Trees. Catalog and Cultural Guide FREE.

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HELP DEFENSE—PROFIT YOURSELF
Produce more eggs and chickens at new high prices. American Poultry Journal tells how. 5 years \$1.00, 6 months 10c. Coin or Stamp.
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TEST THEM EXAMINE THEM



We make FALSE TEETH for you by mail from your own impressions. You have satisfaction of MONEY-BACK GUARANTEE. Customers report satisfaction but you be your own judge. **SEND NO MONEY** WRITE TODAY for FREE Booklet and Material.

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IF you suffer monthly

FEMALE PAIN

which makes you

WEAK, CRANKY

NERVOUS, BLUE—



Try taking famous Lydia E. Pinkham's Vegetable Compound at once. It's one medicine made especially for women that helps relieve headache, backache, cramps, weakness, nervousness—due to functional monthly disturbances. Taken regularly—Lydia Pinkham's Compound helps build up resistance against such tired cranky feelings. Follow label directions.

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GLASSES \$2.95 & UP by MAIL!

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Good Looking! We GUARANTEE SATISFACTION or Your MONEY BACK. We also repair Broken Glasses. FREE

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\$5.00 Full Size FOOD & HOUSEHOLD PRODUCT ASST.



SEND NO MONEY! Rush name and address for big assortment of FOODS, GROCERIES, SOAPS, ETC.—full size packages, worth \$5.00. Yours ABSOLUTELY FREE! Show these products to friends and neighbors. Take orders for seasonal values, more than 200 quality products used in every home. Earn big profits, full or spare time. No experience necessary. Write for FREE \$5.00 Assortment of Products NOW. ZANOL, 3908 Monmouth, Cincinnati, O.

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AGRICULTURE

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BULWARK OF AMERICA'S DEFENSE

★ Today, Tomorrow, Yesterday!

As we look back we see our gallant forefathers preparing the virgin soil for their first crops. In spite of rugged rock and dense forest they fed the early colonists. We see them overcoming failure with fortitude. We see them giving us our first American farm—bulwark of life itself!

Today that little pioneer farm has multiplied into millions of acres of rich farm land... that so abundantly feeds our millions and has helped to make us a great nation. Truly all America knows well and well respects the man behind the plow—the American farmer.



We of Anheuser-Busch feel particularly close to this man. Out of nearly a century of pleasant association, we have seen him grow his finest crops and deliver a generous portion to the Home of BUDWEISER. Out of this close partnership we feel the American farmer is greatly responsible for the fine quality beer—BUDWEISER—that today holds such universal acclaim.



A BEVERAGE
OF
MODERATION

Budweiser

TRADE MARK REG. U. S. PAT. OFF.

ANHEUSER-BUSCH • ST. LOUIS

THE PRUNING QUIZ

How good a pruner are you? If you can answer correctly all the questions, you are doing well. Answers are on page 20.

True False

1. Narrow angle crotches are stronger than wide angle crotches.
2. When pruning, the cut should be made next to a bud or lateral branch.
3. Thin wood pruning means cutting out all thin wood which is several years old.
4. Lopping shears are better adapted to pruning bramble fruits than hand shears.
5. Dehorning a peach tree means cutting it off at the trunk.
6. The four-cane Kniffen system is a method of pruning boysenberries.
7. The cutting edge of a pruning shears should be honed on one side only.
8. First motor driven pruning tool was put on the market last year.
9. Peach flower buds are never terminal buds.
10. A pruned tree will bear earlier than an unpruned tree.

PRUNING GRAPEVINES

AFTER the leaves have fallen, one month is about as good as another for pruning grapevines in sections where winter temperatures rarely drop lower than 10 degrees below zero.

DECEMBER, 1941



PLAN NOW

TO USE ELGETOL FOR YOUR DORMANT SPRAY

Prepare now for your dormant spray applications by getting your supply of ELGETOL, the non-caustic dinitro dormant spray containing no oils. ELGETOL controls Aphid, Bud Moth, Oyster Shell Scale, Cherry Case-Bearer, Pear Psylla, and is used as a ground spray control for Apple Scab, Cherry Leaf Spot, Raspberry Anthracnose and Asparagus Rust. Or ELGETOL can be combined with oil to control both Aphid and Scale insects at the same time.

Write for the 1942 ELGETOL spray chart which gives the latest recommendations and directions for use.

STANDARD AGRICULTURAL CHEMICALS, INC.

Davis, Calif. - 1301 Jefferson St., Hoboken, N. J.



AMERICAN FRUIT GROWER

PAGE 19

OPPORTUNITY ADS

Only 15c a Word—CASH WITH ORDER. Count each initial and whole number as one word. ADDRESS: AMERICAN FRUIT GROWER, 1370 Ontario Street, Cleveland, Ohio

BABY CHICKS

FOR QUICK CASH RAISE CARNEY CHICKS FOR broilers and layers. Carney broilers can be marketed in eight weeks with big profit to you. Broiler and egg prices are high and probably will be higher. Write today for Carney's low prices and early delivery dates. CARNEY HATCHERY, Box 42, Shelbyville, Indiana.

DAVIS STILL DELIVERS QUALITY CHICKS AT lowest possible prices in spite of greatly increased costs. Free catalog tells how Davis again improves quality with importations of R. O. P. and pedigreed males. Half-million egg hatching capacity added this year assures prompt delivery to you. Your choice of all leading money-making breeds. "Championship breeding" Sexed or unsexed chicks at prices that will surprise you. Write for catalog, prices and iron-clad 14-day guarantee. DAVIS POULTRY FARM, Route 3, Ramsey, Indiana.

HINKLE STRAIN BLENDED CHICKS ARE TOPS for both broilers and layers. In our strain blended chicks, you get extra quick growth, livability and high egg production. We will be able to give you reasonably quick delivery of all heavy broiler breeds. Can furnish Cockerels and Pulletts. Write for prices and free catalogue. GREENSBURG HATCHERY, Box 50, Greensburg, Indiana.

BEEES

BEEES—GOOD SIDE LINE, PLEASURE, PROFIT. Send \$1.00 for book, "First Lessons in Beekeeping", (new edition), and one year's subscription. Catalog free. AMERICAN BEE JOURNAL, Box G, Hamilton, Illinois.

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FOR SALE: FARQUAHR & MT. GILEAD CIDER Presses, all sizes, new and rebuilt. Supplies. W. G. RUNKLE MACHINE COMPANY, 185 Oakland St., Trenton, N. J.

DAIRY GOATS

DAIRY GOAT JOURNAL, DEPT. 203, FAIRBURY, Neb. Monthly magazine crammed with helpful information. 3 years \$1.00. Introductory: 3 copies 10c.

EVERYTHING FOR THE ORCHARD

PRUNING, GRAFTING, BUDDING TOOLS—KNIVES, Saws, Shears, Hand and Pole Pruners, Jones Patch Budders, Waxers, Wax Melters, Raffles, Rubber Budding Strips, J. & J. Nursery Tape, Tree Seal, Tree Kote, Sa-Ya-Tree, Hormodin, Peat Moss, Tree Surgeon Supplies. SPRAYERS, DUSTERS, MATERIALS—POWER AND Hand Sprayers, Spray Materials and Dust Mixtures. Hand and Power Dusters. Sprayer Accessories, Guns, Rods, Nozzles, Hoses, Weed Killers, Wood Preservatives, Hydrometers, Hygrometers, and Magnifiers. Manufacturers' Stock Low, Recommend Prompt Action. EDWIN C. TYSON, Wholesale and Retail, Flora Dale, Penna.

FINEST HOSIERY

LOVELY LOOKING, BEAUTIFUL HOSIERY—4 PAIRS—\$1.25. (Trial 35c). Lasts longer. "DIREX", AF346W. Broad, Savannah, Georgia.

FOR SALE

1148-ACRE FARM. THREE HUNDRED ACRES peaches. Two hundred acres apples. Excellent condition. Equipment necessary for operation on hand including twelve tenant houses, packed, storages, trucks, tractors, plows, sprayers, unencumbered. Real opportunity. Details on request. PINEHURST PEACH CO., INC., West End, N. Carolina.

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FRUIT TREES, BERRY PLANTS, ORNAMENTALS. Complete Line Fruit and Nut Trees: Blueberry, Boysenberry, Strawberry, Raspberry, Grape, Asparagus Plants, Flowering Shrubs, Shade Trees, Evergreens. One of America's leading Nurseries selling direct with 75 years experience guarantees Satisfaction. Send for free Catalogue. BOUNTIFUL RIDGE NURSERIES, Box F-121, Princess Anne, Md.

THIN-SHELL BLACK WALNUTS—RAPID GROWERS. Beautiful shades; bear 2nd year. Nuts large, easily cracked. Catalog free. CORSICANA NURSERY, Corsicana, Texas.

25,000 NEW, HARDY VARIETIES PEACH AND APPLE trees. Catalog free. MARKHAM, Fruit Breeder, Xenia, Illinois.

SOFTSHELL BLACK WALNUTS—"COLDPROOF" FIG bears fruit first year. Blightproof Chestnuts—Drawless Giant Persimmons—Giant Pecans. All trees early bearing, grow North. DELTA NURSERY, Vance, Mississippi.

OLD MONEY WANTED

WILL PAY \$15.00 EACH FOR CERTAIN LINCOLN Pennies! Indianheads \$100.00; Dimes \$1,000.00. All rare coins wanted! Illustrated catalogue 10c. FEDERAL COIN EXCHANGE, 12 AFG, Columbus, Ohio.

PAGE 20

APPLES VS. MOUTH BACTERIA

Brushing the teeth does a good job of removing food debris and other material sticking to molars and bicusps. But when it comes to cleansing the mouth of bacteria, the toothbrush is not so effective. This finding was reported last week by Dr. H. T. Knighton of the University of Louisville at the Houston, Texas, meeting of the American Dental Association.

Dr. Knighton experimentally infected the mouths of several persons with harmless yeast bacteria, by having the subjects eat yeast cakes. An hour later he had some of them brush their teeth while others ate apples and other foods or chewed gum or lumps of paraffin. Then he studied the comparative effects of chewing and conventional brushing in removing bacteria.

Chewing the apples eliminated 96.7 per cent of the bacteria while sliced orange and paraffin tied for second place with 95 per cent ratings. As general mouth cleansers candy bars, gum, and bananas followed in that order. But three minutes of tooth brushing plus a mouth rinsing was a poor seventh, bagging only 64.3 per cent of the microbes.—*Newsweek*.

ANSWERS TO QUIZ

(Pruning Quiz Questions on page 19)

1. FALSE. Wide angle crotches make stronger trees.
2. TRUE. Cuts made next to buds will heal more quickly and will avoid stubs.
3. TRUE. The thin or slender branches generally bear the smallest poorest apples.
4. TRUE. Long handles on lopping shears make pruning bramble fruits easier.
5. FALSE. Dehorning is not quite so drastic as this. It means cutting off the top but leaving main branches.
6. FALSE. This is a system for pruning grapes.
7. FALSE. It should be honed on both sides as it will hold its edge longer and wear better.
8. TRUE. The Magennis Power Pruner was introduced last year.
9. TRUE.
10. FALSE. Experiments have shown that pruning is a dwarfing process and tends to delay bearing.

PATENTS

CASH FOR INVENTIONS, PATENTED OR UNPATENTED. Particulars free. Write MR. BAILL, P-9441 Pleasant, Chicago, Illinois.

NATIONAL TRADE MARK COMPANY, MURPHY Building, Washington, D. C. Trade Mark Specialists.

POULTRY

AMERICA'S LEADING POULTRY MAGAZINE TELLS how to raise poultry for profit. Latest discoveries; practical, money-making ideas. Subscribe now. Five years \$1.00, one year 25c. POULTRY TRIBUNE, Dept. C-24, Mount Morris, Ill.

TURKEY WORLD—ILLUSTRATED MONTHLY MAGAZINE devoted entirely to commercial turkey growing. Tells how others make big profits. One year \$1.00; five months trial 50c. TURKEY WORLD, Desk 226, Mount Morris, Illinois.

SITUATION WANTED

MARRIED MAN AS FOREMAN OR MANAGER FRUIT Farm in Pennsylvania. Good references. Age 28. Box 84, Belmont, Ohio.

WALNUT CRACKERS

LATEST WALNUT CRACKERS, DIRECT FROM Manufacturer. BENN THOMPSON, Harrisonburg, Virginia.

WANTED

SONGWRITERS! POEMS WANTED. SUBMIT FOR consideration. FIVE STAR MUSIC MASTERS, 716 Beacon Building, Boston, Mass.

WANTED—CIDER PRESS. WAYNE J. TAYLOR, City Hall, Owosso, Michigan.



FALSE TEETH by MAIL

WORLD'S LARGEST DENTAL PLATE MAKERS

60 DAYS' TRIAL—Send No Money! Made for you from your own mouth impression! Money Back Guarantee of Satisfaction! FREE impression material, directions, catalog.

U.S. Dental Co., 1555 Milwaukee Av., Dept. C-5, Chicago

AMERICAN FRUIT GROWER

"TIFFANY"

Cut 1 1/4" limbs and work in narrow places. Sharp hook does not bruise.

No More Handle Trouble

"TIFFANY"

Hammer Forged Pruners

cut easy and stand the strain. Length 24 in., wt. 2 1/2 lbs. Price \$3.00 prepaid. Satisfaction guaranteed. Circular of Grafting Tools, Bark Scrapers, Pole Pruners, Briar Hooks and Hand Pruners. Dealers wanted.

C. R. TIFFANY, Mfr., CONKLIN, N.Y.

PRUNERS

Light, simple, and powerful. Tough alloy steel levers will not break or bend.

Professional model pruner No. 800

CORONA "CALKINS"

Finer than the best imported pruners. Easiest and cleanest cutting shear—Bar None. Used and endorsed by experts.

At your dealer or send postcard for literature and price.

CORONA CLIPPER CO.
CORONA, CALIF.

DEFEND

NEXT SUMMER'S CROP BY CLEAN-CUT PRUNING

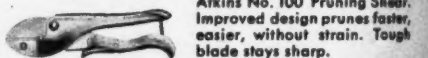
Now!

Now is the time to get ready for pruning—to look over saws and shears. The Atkins' Line includes the type you need. Shown is Atkins No. 22 Pruning Saw—a clean-cutting saw with comfortable handle and teeth that cut on the pull. See Atkins Pruning Tools at your hardware dealer.

E. C. ATKINS AND COMPANY
444 S. Illinois Street
Indianapolis, Ind.

Atkins No. 100 Pruning Shear. Improved design prunes faster, easier, without strain. Tough blade stays sharp.

GET IT NOW!
ATKINS PRUNING CATALOG
Shows Complete ATKINS LINE of Pruning Tools. Free. Send Today.



ATKINS

PRUNING SAWS & SHEARS

TROUBLE-FREE PRUNING No. 127

Curved blade, draw cut Pruning Saw. Ideal for fruit tree pruning. Best quality saw steel. Easy grip handle. Easy to file. 23 in. \$3.00 postpaid. Ask for catalog showing a complete line of pruning tools, shears, saws, scrapers, etc.

PARAGON SAW

For the protection and healing of wounds after pruning use Bartlett Tree Paint. Easily applied with ordinary paint brush. Will not freeze. \$1.50 per gallon F.O.B. Detroit.

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3044 E. Grand Blvd. Detroit, Mich.

PRUNING COMPOUND

For the protection and healing of wounds after pruning use Bartlett Tree Paint. Easily applied with ordinary paint brush. Will not freeze. \$1.50 per gallon F.O.B. Detroit.

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STATIC

GRAFTING COMPOUND

Asphalt Emulsion—Applied Cold

For all types of tree grafting, wound dressing, etc. No heating necessary. Just mix with water and apply cold. Adheres firmly to all surfaces. Does not retard the growth of callus. Not affected by the hottest weather. Easy to apply—economical to use on any kind of tree. Write for full information.

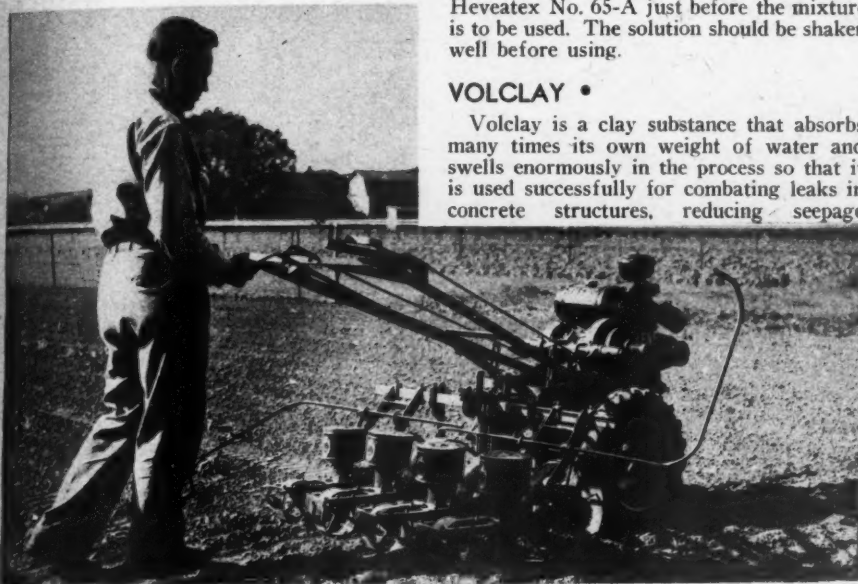
THE FLINTKOTE COMPANY
Industrial Products Division
39 Rockefeller Plaza
New York, N. Y.

NEW

- HIWHEEL TRACTOR
- STAINLESS INKS
- LATEX FOR GRAFTING
- VOLCLAY
- BOOKLETS

HIWHEEL TRACTOR •

A grower of small fruits finds the Bolens HiWheel Tractor Model 8EZ and 9EZ a good general purpose heavy duty walking tractor which greatly assists him in the growing of small fruits. This tractor also will prove useful in beekeeping, poultry



raising, gardening, and in nursery work.

With the power of a two-horse team, this implement is ready for work in the winter or summer and can be handled easily by a man, woman or child. It has lift levers, control handles, individual wheel brakes for power turning, two speeds forward and reverse, and is compact and accurate enough to do all kinds of light garden work.

The Bolens Products Company has a complete line of power hoes, garden tractors and high wheel tractors, practical for a wide variety of uses and economical enough to be available to everyone.

Among the manufacturer's products are the Power Hoe Model 9B which straddles rows as narrow as 11 inches and which has a maximum clearance of 12 inches, and the garden tractor (pictured above), handling a four row seeder. Description of other implements is available upon request.

STAINLESS INKS •

Leading manufacturers now use an ink on their cotton bags which easily washes out. It prints satisfactorily and saves the bag for further use. Bemis Bro. Bag Company developed it and recommends that bags on which it is used be washed as follows:

Soak overnight in soap suds. Wash in hot soap suds the following morning. If all traces of the ink are not then removed, boil 10 minutes in these suds.

LATEX FOR GRAFTING •

Rubber latex is a suitable material for grafting purposes. A certain type of latex combined with specially treated aluminum paste gives good results. These materials may be mixed readily and are non-toxic. Heveatex Corporation gives the following formula for the preparation of the mixture:

Prepare a solution consisting of one gallon of water and two ounces of Heveatex Stablax C. One ounce of this solution

should be mixed then with one ounce of pure aluminum powder. This will result in an aluminum paste which readily can be mixed with Heveatex No. 65-A.

It is recommended that two ounces of this aluminum paste be used to each pound of Heveatex No. 65-A. The aluminum paste should be prepared and added to the Heveatex No. 65-A just before the mixture is to be used. The solution should be shaken well before using.

VOLCLAY •

Volclay is a clay substance that absorbs many times its own weight of water and swells enormously in the process so that it is used successfully for combating leaks in concrete structures, reducing seepage

through soil and sand, sealing cracks and joints in concrete, tile or wood, and in the new construction work of a cold storage or other type of building it can be used under the floors or between sub-surface walls and outside earth.

The manufacturer, American Colloid Company, upon request, will give advice on specific problems which can be overcome by the use of Volclay.

BOOKLETS •

The fruit grower who wishes to plan an orchard during the coming winter months should have on hand one of the two new booklets, recently printed by Stark Brothers Nurseries and Orchard Company. If a small planting is under consideration the booklet entitled "Simplified Way To Grow Your Own Fruit" would be of immeasurable use.

STARK'S NEW GUIDE TO PROFITABLE ORCHARDING

How To Make YOUR Orchard Successful & Profitable



"Money Does Grow on Fruit Trees"

Issued by
SPECIAL SERVICE DEPT.
ORCHARD ADVISORY DEPT.
Stark Brothers Nurseries & Orchard Co.
LOUISIANA, MO.

For copies of these booklets, write to
AMERICAN FRUIT GROWER, 1370 Ontario
St., Cleveland, Ohio.

AMERICAN FRUIT GROWER



BETTER fruit, larger crops, greater profits are the inevitable reward for intelligent fruit tree pruning. For years wise orchardists have specified

SEYMOUR SMITH

TREE PRUNING TOOLS

because they know they have been designed and made to specifications for just such work.

NO. 119



Snop-Git
PRUNER

Its patented features make it the world's finest. V Blade and anvil cutting action gives sharp, intensive power almost effortlessly. No hand fatigue. Takes up to 34" wood. Chrome finish No. 119-9" also-\$29.00* each.



LONG HANDLED

PRUNER

NO. 525

Improved lightweight balanced tool for orchard and general use. Super cutting action supplied by rugged dual blades for close, clean work. Blade efficient to very tip. Takes up to 1 1/2" wood. No. 525-28 inches overall-\$3.75* each.

*Prices 10% higher west of Rocky Mountains

48 Page Pruning Guide Free With Purchase or Sent on request 10c. ORDER DIRECT OR FROM YOUR SUPPLIER. SEND FOR CATALOG

SEYMOUR SMITH & SON INC

oldest, largest makers of pruning tools

1212 Main St., Oakville, Ont.



FAVORITE POLE SAW

We have purchased the saw business of the Fruit Growers Saw Co., and are now making Pole and D Handle Saws. Write for PRUNING EQUIPMENT folder JOHN BACON, INC., Gasport, N. Y. "Fruit and Vegetable Growers' Supplies & Equipment"



HKP

Professional
PRUNERS

You can buy a hammer for anything from a dime up—and pruning tools, too, run all the way up and down in price—you get no more than you pay for. The skilled worker wants good tools, and that is the only kind we make—tools that do the work and stand up in hard usage. Take our Twin Cut No. 9 and you have a fine pruner—good steel, heat-treated; good design, edges stay sharp, and both blades cut clean and smooth. The Pointcut is another fine tool—cuts close to the point with no spreading or twisting of jaws. We make a number of models and sizes including Pole Pruners, Forester for brush clearing and heavy cutting, one-hand cutters, etc. It will pay you to find out more about Porter Pruners—just write for illustrated Catalog.

H. K. PORTER, Inc.
Everett, Mass.

FIRST STEPS IN FRUIT GROWING

OUTWITTING RODENTS IN THE ORCHARD

USE SHARP TOOLS

"PRUNE whenever the knife is sharp" is poor advice, for most pruning should be done in the winter. However, pruning must be done with sharp tools. Keen-edged shears and sharp saws are necessary for clean cuts and quick-healing pruning wounds.

When heading back branches, be sure to cut next to an outside branch or bud. Thus, no stubs will be left through which diseases can enter the tree. Below are three illustrations, showing the correct way to cut back to a bud. The drawing on the left shows the cut too far from the bud; the drawing in the center pictures the cut too close; and the drawing on the right shows



the correct distance. When removing large branches, make the cut parallel and as close as possible to the mother branch. Leave no stubs as they delay healing, but do not prune so closely that part of the main branch is cut away, making an unnecessarily large wound.

GET SET FOR WINTER

BECAUSE water expands with terrific force when it freezes, many undrained spray pumps were broken last winter. Now is the time, before severe freezing weather sets in, to drain pumps and to remove valves and valve parts for a thorough cleaning and oiling. Remember that many pumps have several drain plugs so be sure to open all of them. Spray hose also must be drained. Don't hang the hose over a nail because then it is very apt to kink; rather, coil it and store in a dark place, like your basement. If your spray rig has rubber tires, it is wise to put it up on blocks. Tires have a habit of going flat when unattended and, when this happens, side walls break.

"HAWKS" GUARD FRUIT

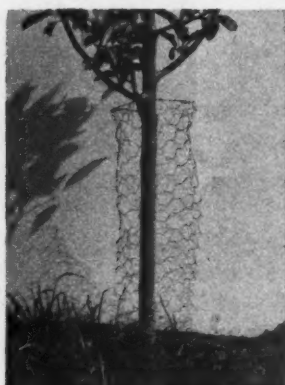
AN Arkansas grower has proven that lifelike model hawks will scare other birds from berry patches and fruit trees. These can be made now, when work is slack, for use next summer. This grower makes them from plywood or sheet metal and enamels them in true colors. They are placed on wires so that they will shift, like a weather vane in the wind. These hawks frightened away fruit-destroying sparrows and blue-jays where shining bits of metal strung on string, metal mirror and scarecrows were ineffective.

REQUIRED READING

"FACTORS Affecting Size and Color of Fruit," Bul. 428, 1941, by A. E. Murneck, Missouri Agricultural Experiment Station, Columbia.

"Diseases and Enemies of the Honey-bee," Cir. 156, Revised 1941, by E. J. Anderson, Pennsylvania State College of Agriculture, State College.

PAGE 22



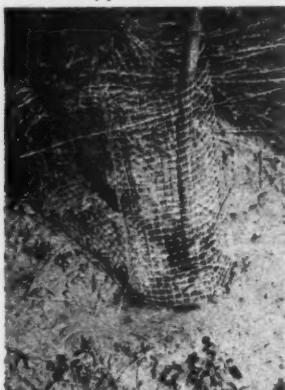
WRONG—Mice easily can go through this size of chicken wire netting guard. It is best to use 1/4" hardware cloth.



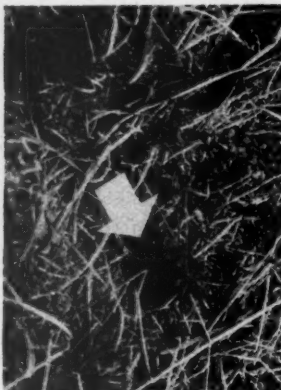
RIGHT—Newspapers are good protection against rabbits. However, mice will burrow underneath to the trunk.



RIGHT—Burlap is as useful as newspapers for rabbits. Burlap and paper wrapping should be removed in spring.



WRONG—Wire guard should extend into ground at base of tree; should not be allowed to lean against or touch tree.



WHERE—The arrow points to a mouse runway. These will be found along ridges and furrows in heaviest cover.



HANDY—Cardboard mailing tubes split down the side are satisfactory protection from damage by rabbits.



BRIDGE GRAFTING—It often will save trees injured by rodents. However, it must be done the following spring.



INARCHING — Grafting a young tree to an injured tree is often feasible where roots have been severely injured.



GRAFTING SUCKERS—Suckers from the roots have been grafted successfully over the injury onto the trunk of the tree.

INDICATIONS show that mouse and rabbit populations are reaching a peak and damage to fruit trees may be severe this winter. Rabbits may be controlled by repellents or wire guards. However, it must be remembered that after a heavy snow rabbits may be able to reach above the guard and injure the tree. Guards should be pushed into the ground two or three inches to keep field mice from the trees.

The U. S. Biological Survey has developed a poison which is effective for the control of field mice. Growers should

AMERICAN FRUIT GROWER

contact their local county agents to find where the poison may be bought or write to the Fish and Wild Life Service, Department of Interior, Washington, D. C. According to W. W. Dykstra of the Fish and Wild Life Service, the cost of treating orchards with this poison is extremely small and it gives excellent results if properly applied. Bait stations are not necessary as apple cubes sprinkled with poison are placed directly in mouse trails under cover of mulch or other material. The poison is most effective against the meadow or field mouse which runs above the ground.

DECEMBER, 1941

LET'S THINK NOW



of the needs of '42

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